WORK INSTRUCTION

Title: **Minor Repair of IV and OC Lid and Body Exposed Surfaces**

Instruction No. RH.07 Rev. 0.1, October 2003

Approved for Use by: Michael R. Brown Effective Date: October 2003

Applicable Drawings:

- X-106-500SNP (Sheets 1-9) RH-TRU 72-B Packaging SARP Drawings

SARP Requirements:

- Chapter 8.0. As required.

Tools Required:

- Lifting equipment
- Mass spectrometer leak detector
- Lid stands
- IV/OC test port tool
- Calibrated ultrasonic thickness (UT) gauge

Spare Parts Required:

- None

Materials Required:

- 300 to 600 grit emery cloth (new and clean)
- Denatured alcohol or equivalent
- Lint-free rags

Safety Requirements:

- Safety will be observed in accordance with site requirements.

Prerequisite Conditions:

- IV/OC lid(s) must be removed for access to seal surfaces.

Instruction Steps:

- This instruction **is not required to be attached** to the Maintenance Record, but may be used as a checklist during performance of maintenance.
- Performance of this work instruction shall be documented on the Maintenance Record.

☐ IV Inner/Outer Shell Wall Exposed Surfaces

1.0 Using alcohol and lint-free rags, thoroughly clean area to be repaired.

2.0 Using Attachment 1, record UT measurements before polishing surfaces.

3.0 Number the location(s) on Attachment 1, Data Sheet.

4.0 List the location number(s) on Attachment 1, Data Sheet.

NOTE: When performing Step 5.0, take periodic UT measurements to keep wall thickness at greater than 0.365 in. Shell thickness in the ground weld joints will be greater than 0.325 in.

NOTE: If the indication cannot be removed while maintaining a wall thickness of 0.365 in. or greater, **STOP** polishing and notify RH Packaging Maintenance Engineer for guidance.

5.0 Using emery cloth, polish affected area until smooth.

6.0 Clean repaired area to remove any residue.

7.0 Record final UT measurements on Attachment 1, Data Sheet.

8.0 If repair is on a sealing surface, check surface finish after repair per work instruction WI-RH.06.

☐ IV Lid Exposed Surfaces

1.0 Using alcohol and lint-free rags, thoroughly clean area to be repaired.

2.0 Using Attachment 1, record UT measurements before polishing surfaces.

3.0 Number the location(s) on Attachment 1, Data Sheet.

4.0 List the location number(s) on Attachment 1, Data Sheet.

NOTE: When performing Step 5.0, take periodic UT measurements to keep lid thickness at greater than 6.25 in. (**NOT** including pintle life socket, port locations, or lifting holes).

NOTE: If the indication cannot be removed while maintaining a material thickness of 6.25 in. or greater, **STOP** polishing and notify RH Packaging Maintenance Engineer for guidance.

5.0 Using emery cloth, polish affected area until smooth.

6.0 Clean repaired area to remove any residue.

7.0 Record final UT measurements on Attachment 1, Data Sheet

☐ IV Bottom Forging Exposed Surfaces

1.0 Using alcohol and lint-free rags, thoroughly clean area to be repaired.

2.0 Using Attachment 1, record UT measurements before polishing surfaces.

3.0 Number the location(s) on Attachment 1, Data Sheet.

4.0 List the location number(s) on Attachment 1, Data Sheet.

NOTE: When performing Step 5.0, take periodic UT measurements to keep material thickness at greater than 1.438 in.

NOTE: If the indication cannot be removed while maintaining a wall thickness of 1.438 in. or greater, **STOP** polishing and notify RH Packaging Maintenance Engineer for guidance.

5.0 Using emery cloth, polish affected area until smooth.

6.0 Clean repaired area to remove any residue.

7.0 Record final UT measurements on Attachment 1, Data Sheet.

☐ OC Inner Shell Wall Exposed Surfaces

1.0 Using alcohol and lint-free rags, thoroughly clean area to be repaired.

2.0 Using Attachment 1, record UT measurements before polishing surfaces.

3.0 Number the location(s) on Attachment 1, Data Sheet.

4.0 List the location number(s) on Attachment 1, Data Sheet.

NOTE: When performing Step 5.0, take periodic UT measurements to keep wall thickness greater than 0.990 in. Shell thickness in the ground weld joints will be greater than 0.950 in.

NOTE: If the indication cannot be removed while maintaining a wall thickness of 0.990 in. or greater, **STOP** polishing and notify RH Packaging Maintenance Engineer for guidance.

5.0 Using emery cloth, polish affected area until smooth.

6.0 Clean repaired area to remove any residue.

7.0 Record final UT measurements on Attachment 1, Data Sheet.

8.0 If repair is on a sealing surface, check surface finish after repair per work instruction WI-RH.06.

☐ OC Outer Shell Wall Exposed Surfaces

1.0 Using alcohol and lint-free rags, thoroughly clean area to be repaired.

2.0 Using Attachment 1, record UT measurements before polishing surfaces.

3.0 Number the location(s) on Attachment 1, Data Sheet.

4.0 List the location number(s) on Attachment 1, Data Sheet.

NOTE: When performing Step 5.0, take periodic UT measurements to keep wall thickness at greater than 1.490 in. Shell thickness in the ground weld joints will be greater than 1.450 in.

NOTE: If the indication cannot be removed while maintaining a wall thickness of 1.490 in. or greater, **STOP** polishing and notify RH Packaging Maintenance Engineer for guidance.

5.0 Using emery cloth, polish affected area until smooth.

6.0 Clean repaired area to remove any residue.

7.0 Record final UT measurements on Attachment 1, Data Sheet.

☐ OC Thermal Heat Shield

1.0 Using alcohol and lint-free rags, thoroughly clean area to be repaired.

2.0 Using Attachment 1, record UT measurements before polishing surfaces.

3.0 Number the location(s) on Attachment 1, Data Sheet.

4.0 List the location number(s) on Attachment 1, Data Sheet.

NOTE: When performing Step 5.0, take periodic UT measurements to keep wall thickness at greater than 0.123 in.

NOTE: If the indication cannot be removed while maintaining a wall thickness of 0.123 in. or greater, **STOP** polishing and notify RH Packaging Maintenance Engineer for guidance.

5.0 Using emery cloth, polish affected area until smooth.

6.0 Clean repaired area to remove any residue.

7.0 Record final UT measurements on Attachment 1, Data Sheet.

☐ OC Lid Exposed Surfaces

1.0 Using alcohol and lint-free rags, thoroughly clean area to be repaired.

2.0 Using Attachment 1, record UT measurements before polishing surfaces.

3.0 Number the location(s) on Attachment 1, Data Sheet.

4.0 List the location number(s) on Attachment 1, Data Sheet.

NOTE: When performing Step 5.0, take periodic UT measurements to keep material thickness at greater than 5.875 in. (**NOT** including pintle lift socket, port locations, lifting holes, or recessed ring).

NOTE: If the indication cannot be removed while maintaining a material thickness of 5.875 in. or greater, **STOP** polishing and notify RH Packaging Maintenance Engineer for guidance.

5.0 Using emery cloth, polish affected area until smooth.

6.0 Clean repaired area to remove any residue.

7.0 Record final UT measurements on Attachment 1, Data Sheet.

☐ OC Bottom Forging Exposed Surfaces

1.0 Using alcohol and lint-free rags, thoroughly clean area to be repaired.

2.0 Using Attachment 1, record UT measurements before polishing surfaces.

3.0 Number the location(s) on Attachment 1, Data Sheet.

4.0 List the location number(s) on Attachment 1, Data Sheet.

NOTE: When performing Step 5.0, take periodic UT measurements to keep material thickness at greater than 4.875 in. (**NOT** including alignment lug recess or recessed ring).

NOTE: If the indication cannot be removed while maintaining a material thickness of 4.875 in. or greater, **STOP** polishing and notify RH Packaging Maintenance Engineer for guidance.

5.0 Using emery cloth, polish affected area until smooth.

6.0 Clean repaired area to remove any residue.

7.0 Record final UT measurements on Attachment 1, Data Sheet.

Verification Requirements:

1.0 Work performed is described on the Maintenance Record.

2.0 Work instruction is listed on the Maintenance Record.

3.0 If used, data sheet is attached to the Maintenance Record.

4.0 Any work completed affecting a sealing surface must also have a helium leak test performed using applicable sections of DOE/WIPP 02-3285 RH Packaging Maintenance Manual.

5.0 Helium leak test documentation is attached to the Maintenance Record.

Attachment 1 - Data Sheet

Packaging S/N _____ Check One ☐ IV ☐ OC

Ultrasonic Thickness Gauge S/N: _____/ Calibration Due Date: _____

Indication Number	Ultrasonic Thickness Before	Ultrasonic Thickness After
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
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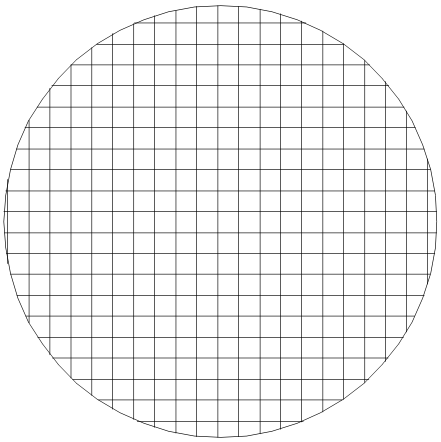
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		
31		
32		
33		
34		
35		

QA Before: _____ _____ Date: _____

QA After: _____ Date: _____

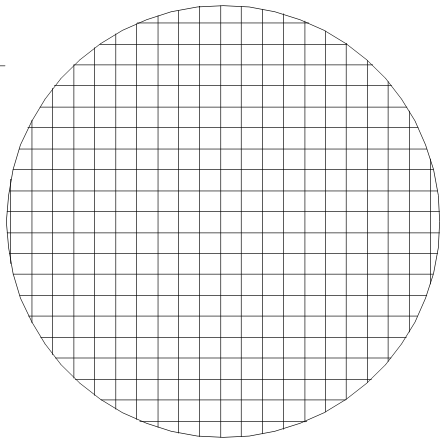
Attachment 1 - Data Sheet



LID

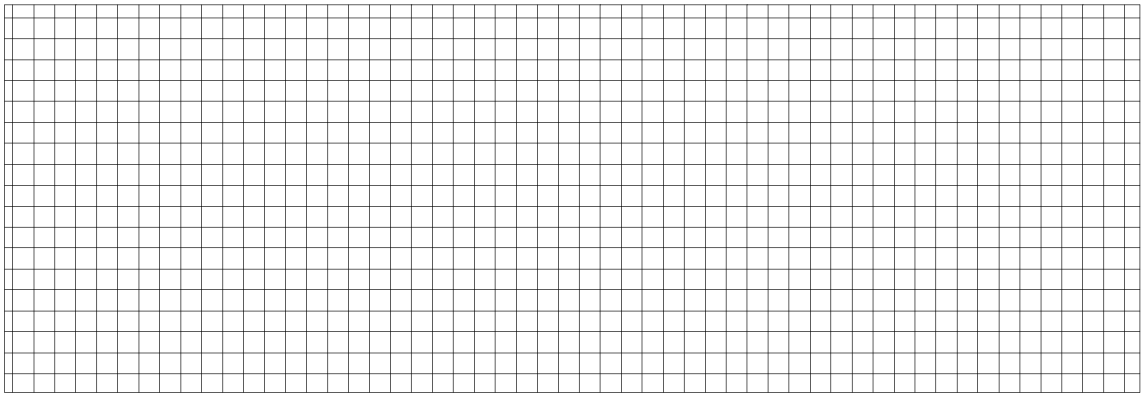
SERIAL NO._____

INDICATE APPROX. LOCATION(S) OF MEASUREMENTS



LOWER HEAD

CHECK ONE
IV _____
OC _____



BODY